

levels of a product from said different glycosyltransferase, wherein said product is an epitope reactive with an antibody that causes hyperacute rejection.

2. (AMENDED) The nucleic acid according to claim 1, wherein said localization signal localizes said catalytic domain thereby to enable the catalytic domain to compete with said different glycosyltransferase for a substrate.

3. (AMENDED) The nucleic acid according to claim 1, wherein the localization signal is from a glycosyltransferase which produces glycosylation patterns which are recognised as foreign by a transplant recipient.

4. (AMENDED) The nucleic acid according to claim 1, wherein the localization signal comprises the amino terminus of the different glycosyltransferase.

5. (AMENDED) The nucleic acid according to claim 1, wherein the localization signal is from  $\alpha(1,3)$ -glycosyltransferase.

6. (AMENDED) The nucleic acid according to claim 1, wherein the first glycosyltransferase is selected from the group consisting of H-transferase, secretor, and sialyltransferase.

7. (AMENDED) The nucleic acid according to claim 1, wherein the catalytic domain and the localization signal are each from a mammal selected from the group consisting of human, primates, ungulates, dogs, mice, rats and rabbits.

8. (AMENDED) The nucleic acid according to claim 1, wherein the localization signal is from a cell that belongs to the same species as the cell of claim 1.

9. (AMENDED) The nucleic acid according to claim 1, comprising a sequence encoding the catalytic domain of H transferase and a nucleic acid sequence encoding a localization signal from  $\alpha(1,3)$ -galactosyltransferase, which transferase catalyses the production of an epitope reactive with an antibody to thereby cause hyperacute rejection.

10. (AMENDED) ~~The nucleic acid according to claim 9, wherein the catalytic domain and the localization signal are from pigs.~~

E' F 11. (AMENDED). The nucleic acid according to any one of claims 1 to 10, which encodes the NH2 terminal cytoplasmic tail of GT attached to the transmembrane, stem and catalytic domains of Ht.

E 2 15. (AMENDED) ~~A nucleic acid according to claim 1, wherein the localization signal is selected from the group consisting of MNVKGR, MNVKGK and MVVKGK.~~

16. (CANCELLED).

Sub F 3 17. (AMENDED) A method of producing the nucleic acid according to claim 1, comprising the step of operably linking a nucleic acid sequence encoding a catalytic domain from a first glycosyltransferase to a nucleic acid sequence encoding a localization signal of a different glycosyltransferase, said localization signal comprising a cytoplasmic tail of said different glycosyltransferase.

E 3 18. (AMENDED) A method of reducing an amount of a carbohydrate exhibited on a surface of a cell, said method comprising causing a nucleic acid to be expressed in said cell wherein said nucleic acid encodes a chimeric enzyme which comprises a catalytic domain of a first glycosyltransferase and a localization signal of a different glycosyltransferase, said localization signal comprising a cytoplasmic tail of said different glycosyltransferase, whereby said chimeric enzyme is located in a cell compartment or organelle where it is able to directly compete for substrate with said different glycosyltransferase, and wherein said different glycosyltransferase is located in the same compartment or organelle as said chimeric enzyme, resulting in reduced levels of a product from said different glycostyltransferase, wherein said product is an epitope reactive with an antibody that causes hyperacute rejection.

19. (AMENDED) A method of producing a cell ~~from a donor species~~ which is immunologically acceptable to a recipient species by reducing levels of carbohydrate on said cell, wherein ~~said~~ carbohydrate is capable of stimulating recognition of the cell as non-self by the

recipient, said method comprising causing a nucleic acid to be expressed in said cell wherein said nucleic acid encodes a chimeric enzyme which comprises a catalytic domain of a first glycosyltransferase and a localization signal of a different glycosyltransferase, said localization signal comprising a cytoplasmic tail of said different glycosyltransferase, whereby said chimeric enzyme is located in a cell compartment or organelle where it is able to directly compete for substrate with said different glycosyltransferase, and wherein said different glycosyltransferase is located in the same compartment or organelle as said chimeric enzyme, resulting in reduced levels of a product from said different glycosyltransferase, wherein said product is an epitope reactive with an antibody that causes hyperacute rejection.

23. (AMENDED) An expression unit that expresses a nucleic acid according to claim 1, which when used to transform a cell results in a cell which is immunologically acceptable to an animal having reduced levels of a carbohydrate on its surface, which carbohydrate is recognized as non-self by said species.

24. (AMENDED) A retroviral-packaging cassette, retroviral construct or retroviral producer cell comprising the expression unit according to claim 23.

25. (CANCELLED).

26. (NEW) A nucleic acid encoding a chimeric enzyme, wherein said chimeric enzyme comprises

a catalytic domain of a first glycosyltransferase or a carbohydrate modifying enzyme, and

a localization signal of a different glycosyltransferase, said localization signal comprising a cytoplasmic tail of said different glycosyltransferase,

whereby said nucleic acid is expressed in a cell wherein said chimeric enzyme is located in a cell compartment or organelle where it is able to compete for substrate with the different glycosyltransferase and wherein the different glycosyltransferase is located in the same compartment or organelle as said chimeric enzyme, resulting in reduced levels of a product from said different glycosyltransferase, wherein said product is an epitope reactive with an antibody that causes hyperacute rejection.